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Sleep Hygiene in Danbury CT:

Providing a Resource to Prompt and Initiate Behavior Change

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Newtown Primary Care, Danbury, Ct

Preceptor: Dr. Anureet Gill

The Problem: Sleeplessness is markedly prevalent in the primary care setting, and causes many downstream health problems.

- More than one third of Americans do not get enough sleep on a regular basis. ¹
- This lack of sleep has both direct and indirect negative implications on overall health. For instance, in a recent survey, more than one third of American adults report unintentionally falling asleep during the day at least once in the past month. ²
- Even more startling, nearly five percent of respondents reporting nodding off or falling asleep while driving during the same period. ²
- Chronic insomnia can directly cause several deleterious health outcomes, among them depression, anxiety, substance abuse relapse, and cognitive impairment. ^{3,4}
- Beyond this, there is data to suggest that insomnia increases the risk of cardiovascular disease, indirectly contributing to hypertension, diabetes, and myocardial infarctions. ^{3,4}

The Problem, pt. 2: Pharmacologic regimens are often inappropriately offered to address sleep difficulties in the primary care setting.

- Controlled substances – among them benzodiazepines and hypnotics – have received increasing scrutiny in a contemporary political climate that recognizes the severity of the opioid public health crisis.
- Despite this, some data suggests the emergence of a recent phenomenon termed “the medicalization of sleeplessness.” One group’s research revealed that in the past couple of decades, “sleeplessness complaints and insomnia diagnoses have increased over time and were far outpaced by prescriptions for sedative hypnotics.”⁵
- Yet, a nonpharmacological alternative exists. A recent systematic review and meta-analysis of 20 randomized, controlled trials evaluating the efficacy of cognitive behavioral therapy for insomnia (CBT-i) underscored that CBT-I produces significant improvements in sleep, with no adverse outcomes.⁶
- In fact, the American Academy of Sleep Medicine recommends to avoid the use of hypnotics as primary therapy for chronic insomnia in adults, preferring CBT-I as first line treatment. Further, the American Geriatric Society recommends against using benzodiazepines or other sedative hypnotics in older adults as a first choice for insomnia.⁷

The Public Health Cost of Sleeplessness

- The estimated cost of insomnia in the United States is approximately \$100 billion annually.⁸
- Included in this estimate is the toll that excessive daytime sleepiness takes on work performance, as well as increasing absenteeism and accidents at work. Sleeplessness also increases accidents and falls in the elderly and contributes to a host of health problems (enumerated on the previous slide) which have their own associated costs.⁹
- Additionally, it is estimated that drowsy driving is responsible for 1,550 fatalities and 40,000 nonfatal injuries annually in the United States.¹⁰
- Interestingly, some data suggests that estimates of the cost of insomnia are confounded with health care costs associated with the prescription of hypnotics themselves. By one researcher's tabulation, more than a quarter of the cost of insomnia could be from deleterious side effects of drugs like zolpidem.¹¹

Community Perspectives

I interviewed a licensed clinical social worker who treats many patients struggling with sleep problems. There were a few salient points.

1. In her clinical experience the biggest barrier to treatment is a prevailing expectation from patients that there is a solution that will help them immediately.
2. For those patients who had been prescribed hypnotics or benzodiazepines to address their sleeplessness, she also identified a level of paradox in the ideas they held regarding treatment. Often, she said, patients believe they “must have their Xanax because it’s the only thing that works.” Yet, when they are probed further, these patients reveal they still have lasting issues with their sleep.
3. On the other hand, in her clinical experience the strategy that works the best is “to meet patients where they are.” For instance, if a patient insists that they must have a television in their room for background noise, instead of indulging this inflexibility, simply exploring an alternative compromise would often yield results (e.g. wearing a sleep mask to eliminate visual exposure to the screen.)
4. Finally, she underscored the importance of managing a patient’s expectations regarding behavioral strategies to treat sleeplessness. If they are counseled to understand that progress will be gradual and not instantaneous, then patients are more likely to try the interventions and have success with them.

Community Perspectives, pt. 2

I also interviewed a nurse at the primary care practice who herself has struggled with sleep in the past several months. Below are some key motifs.

1. She self-identified a number of behaviors that could be targeted to potentially help her sleep. For example, she had recently stopped exercising regularly and she routinely uses electronics such as her tablet and phone for an hour or more immediately before bedtime.
2. She expressed a firm belief that sleep aids (i.e. pharmacologic intervention) would help her, but added that she had not tried them due to a fear that she would become dependent. She was surprised to then learn that CBT-I, and the sleep hygiene practices that it promotes, have been shown to be as, if not more, effective than drug therapy for insomnia.
3. As an employee of the clinic, she was aware that a free, online CBT-I program was available to her. Yet, despite her persistent struggles with sleep, she had still not registered for the program. When probed to consider barriers she faces to doing so, she cited two things. The first is that she was very busy. The second was that she did not think she would “be compliant” with the program, elaborating that she would find it difficult to stick with the homework assignments she knew would be featured.

Intervention and Methodology

Over the course of my family medicine clerkship, I was exposed to the perspectives of several patients who struggled with sleep difficulties. In deliberate consideration of their insight, along with the information I gathered from my formal interviews, I generated an informational flyer concerning sleep hygiene. Its aim was threefold.

1. Encourage patients to use the online CBT-I program already offered by the primary care practice.
2. Offer simple behavioral strategies to target sleep hygiene that are immediately implementable. To compliment these recommendations, provide a few outside informational resources.
3. Manage patients' expectations regarding behavioral change. Encourage them to set small goals and stick with them for a higher likelihood of success.

Intervention and Methodology

GOOD SLEEP HYGEINE HABITS TO START

Pick a consistent bedtime and stick to it every single day of the week, including weekends!

Establish a “screen-free” window of time at night that immediately precedes your sleep. Substitute hard copy books, magazines, or audio podcasts for other electronic devices.

Designate a dedicated space in your home outside of the bedroom to watch television, exercise, eat, and do work.

Incorporate a short (eight to twelve) minute relaxation or meditation practice into your day. [*Free audio links provided on the back of this worksheet!]

Keep a sleep diary to help monitor bed times, wake times, and frequency and length of interruptions. [*Downloadable worksheet link provided on the back of this worksheet!]

Engage in consistent, moderate intensity exercise (like a brisk, half hour walk a few times a week). This has been shown to improve sleep quality.

BAD SLEEP HYGEINE HABITS TO STOP

Don't sleep in on the weekends! It disrupts your body's biological clock, and makes it more difficult to sleep when Monday rolls around.

Don't use screens such as tablets, televisions, or phones before your bedtime.

Don't eat in bed! Don't watch television in bed! Don't do work in bed! Only use the bed for sleep and sex.

Eliminate caffeine and alcohol intake several hours before bedtime. Both can disrupt the quality of your sleep.

Stop using the snooze button on your alarm in the morning. Consider placing your alarm on a bureau that forces you to stand up and leave the bed.

Avoid naps. If you must, limit the nap to an hour or less, and schedule it for the late morning or early afternoon.

SLEEP HYGEINE WORKSHEET

This primary care clinic offers an online six-week program entitled cognitive behavioral therapy for insomnia, or CBT-I for short. The program is designed to systematically tackle problems with sleep. If you have been struggling with your sleep, we strongly recommend this program! Research has shown that it not only works, but its benefits can be long-lasting without the fear of any adverse side effects.

However, the online program requires some commitment, and the benefits that patients get often take some time to be felt. With the responsibilities and stress of everyday life, it can be tough to stick to it. Therefore, this worksheet is designed as a primer to introduce you to some of the basic concepts of sleep hygiene.

You'll notice the suggestions on the opposite side of this page are divided into two columns: good habits to attempt to develop, and bad habits to try to break. As most people who have ever tried to diet or exercise can attest to, establishing habits is one of the hardest things humans can do. Therefore, we recommend you start with a small goal and build from there. Stick the front of this worksheet somewhere visible, like your refrigerator, and then pick one or two suggestions at most. Try to commit to them for a full week. After you have become comfortable with the initial changes, you can add more from there.

ADDITIONAL INFORMATION

The National Sleep Foundation sponsors this website that features an elegant layout with interactive infographics.

<https://sleep.org/>

The New York Times publishes a number of comprehensive wellness guides for common health topics such as sleep. Routine exercise and meditation practices often synergize with optimal sleep health, so we also recommend checking out “The 9-Minute Strength Workout” and “How to Meditate.”

<https://www.nytimes.com/guides/well/how-to-sleep>

The Sleep Medicine Division of Harvard Medical School provides this resource that includes a number of video clips from sleep specialists.

<http://healthysleep.med.harvard.edu/healthy/>

LINKS FOR FREE AUDIO TRACKS TO FACILITATE RELAXATION OR MEDITATION EXERCISES

<http://marc.ucla.edu/mindful-meditations>

<http://www.dartmouth.edu/~healthed/relax/downloads.html>

LINK FOR SLEEP DIARY WORKSHEET

https://static01.nytimes.com/packages/pdf/health/NYTimes_Sleep_Diary_checklist.pdf

Response

- Providers at Newtown Primary Care were enthusiastic about the informational handout on sleep hygiene. The handout was thought to compliment the pre-existing online CBT-I program, serving as a succinct introduction to the concepts and strategies addressed in that service.
- The Director of Family Medicine noted that internal data has revealed while approximately one third of patients who were offered the CBT-I were able to complete it, another third of patients offered only did part of it, and the final third never even tried it.
- The articulated hope from providers regarding the informational handout is twofold. First and foremost, they are optimistic that the worksheet will in it of itself facilitate better sleep in patients through the promotion of healthier habits. Second, providers anticipate it will encourage patients to try the online CBT-I program who otherwise would not have given it a chance.

Evaluating Efficacy and Exploring Limitations

- Evaluating efficacy of the intervention.
 - A month after they were given the handout, patients could be administered a simple three question survey. They could be asked (i) how helpful they found the handout overall, (ii) if they were able to implement any of the strategies suggested in the handout, and (iii) if they explored or accessed any of the additional resources suggested by the handout. This would provide qualitative feedback as to whether or not the handout was encouraging sleep hygiene.
 - Internal data from the primary care clinic could be reviewed to see if the handout impacted usage of the CBT-I program. Ideally, more patients would have accessed the online course, and the ratio of those who completed the program would have increased. Though it would not necessarily imply causation, such a trend would be encouraging.
- Acknowledging limitations.
 - A singular approach is not always the best fit for each individual patient. While some may find suggestions on a sheet of paper to be encouraging, others may prefer a more interactive means of addressing their sleeplessness.
 - Engaging with the handout still requires substantial motivation on the part of the patient. Although they may initially be easier than, say, committing to watch a thirty-plus minute module online, the suggestions nonetheless encourage habits that – like any long-term behaviors – require sustained effort.
 - A select but nonetheless important subset of patients may desire a list of in-person resources such as local meditation or yoga clinics as opposed to online websites. In an effort to streamline the handout and not overwhelm the reader with too much information, these options were omitted.

Recommendations for Future Interventions

- It would be helpful to solicit feedback from those patients that received the handout. Their input could then be used to curate the list of hygiene tips to reflect strategies that actually worked for local individuals who used them.
- The handout could be offered in the waiting room to maximize its reach. This would cast a wider net, and serve to potentially target those patients who don't directly reveal their sleeplessness to providers during acute visits.
- Those who were issued a handout could be formally tracked in the electronic health record. This would allow the provider to follow up with patients regarding their usage of the sleep hygiene strategies, and possibly engage in motivational interviewing with those who were not able to start.

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